Cedar River Instream Flow Commission

Final Minutes

SPU Water Quality Lab

February 5th, 2014

Organizations/Members Present:

- Seattle Public Utilities -- Tom Fox, Rand Little, Karl Burton
- Seattle City Light -- Liz Ablow
- Washington Department of Fish and Wildlife -- Peggy Miller
- US Fish and Wildlife Service --Tim Romanski
- Army Corps of Engineers -- Larry Schick, Ken Brettmann
- NOAA Fisheries -- Randy McIntosh
- Washington Department of Ecology -- Buck Smith

I. Real Time Water Management:

Hydrologic Conditions: Precipitation has been lower than normal for the last 3 months although January was only slightly less than normal. The snowpacks in the Tolt and Cedar watersheds are between 40% and 60% of normal. Currently, SPU is maintaining Chester Morse Reservoir elevation between 1553 and 1554 feet, which is higher than normal for this time of year. If a large storm does occur, the current elevation still allows for releasing water prior to the storm to restore the normal flood pocket. If snowpack is less than 70% of normal at the end of the month, SPU will ask the Federal Energy Regulatory Commission's permission to raise the ring gate at S. Fork Tolt Dam on March 1st instead of May 1st, when it typically occurs. Refill will also begin earlier for Chester Morse Reservoir if water supply conditions do not improve. The 8-week moving average for inflows is above the 50 percentile. Actual flows have been higher than estimated natural flows during periods when water has been released from the dam. Demand has been approximately 100 MGD, which is very similar to the last couple of years. Assuming median precipitation in late winter and spring, and providing 520 cfs through mid-March, the probabilistic model predicts that the reservoir will refill to 1562'. Lowering flows to 280 cfs does not change the refill probability by very much.

Flows below Landsburg are approximately 520 cfs to protect incubating and emerging Chinook salmon from redd dewatering. Tom intends to maintain this flow level until the vulnerable redds that require this level of protection have

completed emergence but, if water supply conditions don't improve, flows will have to be lowered which will cause some Chinook redds to be partially dewatered with associated impacts to incubating and emerging juvenile Chinook. Since the last meeting, downramping rates and guaranteed flows have been in compliance. Tom hopes to be able to provide supplemental flows into mid-April but with elevated flows for redd protection and lower than normal precipitation, that may not be possible.

Weather Forecast: The weather has been dry and cold which is unusual for February. Larry said the current forecast is for a continuation of cold and dry weather for the next couple of days followed with temperatures moderating over the weekend but still below normal. Next week is forecasted to be warmer and wetter with normal precipitation expected for the 14 days after this weekend. Snow level will be around 3,000 feet over the weekend and substantial snow accumulations are expected in the mountains next week.

Lake Washington and the Locks: The current lake elevation is 20', which is the normal minimum winter elevation. Refill will begin on February 15th and the Corps may increase the rate of fill to refill earlier than normal if the snowpack continues to be significantly less than normal. The new refill target would be May 1st if the snowpack doesn't rebound.

Fish Update: Karl reviewed the data analysis packet that helped determine the necessary flows to protect Chinook redds from dewatering. On January 27th, Brian Footen (Muckleshoot Tribe) and Karl, floated the Cedar River to measure redd depths for the 20 shallowest Chinook redds. The flow on that date was approximately 500 cfs. Most of the redds had settled and flattened since spawning and the predicted necessary flows for submergence decreased accordingly. Using the predicted minimum flows for protection and the estimated end of emergence for each vulnerable redd, the level of redd protection was predicted for 4 different flow scenarios (i.e. 280 cfs, 350 cfs, 377 cfs and 411 cfs). There were 4 redds that were slightly dewatered at 500 cfs and those redds will not be provided additional protection above and beyond 520 cfs. Karl noted that the level of dewatering is very small for those redds, considering the dewatered areas are less than 1.5' radius and the redds are typically 15' to 20' long and 10' wide and, in some cases, even bigger. The analysis showed that most of the vulnerable redds would complete emergence by February 24th and all but 11 of the 68 vulnerable redds will complete emergence by the end of February. Tom said that he will try and maintain flows to provide full protection for more than 99% of the total redd count but, if precipitation levels do not improve, it will likely be necessary to lower flows.

II. **Supplemental Studies:** An update will be provided at the next meeting.

III. Agenda for next Meeting:

1) Corps presentation for Locks funding
2) Update on USGS progress for Peak Flow Study.

IV. Conference call adjourned at 10:00 AM